

METHOD AND PROCESSING SYSTEM FOR MONITORING STATUS  
OF SYSTEM COMPONENTS

ABSTRACT OF THE DISCLOSURE

A method and system for monitoring status of a system component during a process. The method includes exposing a system component to a reactant gas during a process, where the reactant gas is capable of etching the system component material to form an erosion product, and monitoring release of the erosion product during the process to determine status of the system component. Processes that can be monitored include a chamber cleaning process, a chamber conditioning process, a substrate etching process, and a substrate film formation process. The system component can be a consumable system part such as a process tube, a shield, a ring, a baffle, an injector, a substrate holder, a liner, a pedestal, a cap cover, an electrode, and a heater, any of which can further include a protective coating. The processing system includes the system component in a process chamber, a gas injection system for introducing the reactant gas, a chamber protection system for monitoring the status of the system component, and a controller for controlling the processing system in response to the status.